

CLAIMS

1. A cordless vacuum cleaner comprising a structure (1) mounted on transport members (R), a turbine (T) carried by the structure (1) for creating suction in a particle collector (S) via a filter membrane (M), a beater brush (B) secured to the structure (1) and connected to said collector via a first duct (C), a suction device (42) suitable for being connected to said collector (5) via a flexible second duct (41), means (30) for selectively putting said first duct (C) or the coupling (40) for said second duct (41) into communication with said collector (S), a first motor (M1) for driving said turbine (T), a second motor (M2) for driving the beater brush (B), an electrical circuit for powering said motors (M1, M2) from a battery (B) carried by said structure (1), and a three-position control member (31) serving in a first position to stop the motors (M1, M2), in a second position to cause the first motor (M1) to operate, and in a third position to cause both motors (M1, M2) to operate simultaneously, the vacuum cleaner being characterized by the fact that the motors (M1, M2) are electrically powered in such a manner that when the control member (31) is in the third position, the two motors (M1, M2) are powered in series.
2. A vacuum cleaner according to claim 1, characterized by the fact that the control member comprises a knob (31) mounted to turn on the structure (1), said knob presenting two cam paths (39a, 39b) each suitable for causing a respective switch to open or close, namely a first switch (S1) which, when in the closed position, powers both motors (M1, M2), and a second switch (S2) which, when in the closed position, short-circuits the second motor (M2).
3. A vacuum cleaner according to claim 2, characterized by the fact that the knob (31) further presents the means

(30) for selectively putting the first duct (C) or the coupling (40) for the second duct (41) into communication with the collector (S).

- 5 4. A cordless vacuum cleaner comprising a structure (1) mounted on transport members (R), a turbine (T) carried by the structure (1) for creating suction in a particle collector (S) via a filter membrane (M), a beater brush (B) secured to the structure (1) and connected to said
10 collector via a first duct (C), a suction device (42) suitable for being connected to said collector (5) via a flexible second duct (41), means (30) for selectively putting said first duct (C) or the coupling (40) for said second duct (41) into communication with said collector
15 (S), a first motor (M1) for driving said turbine (T), a second motor (M2) for driving the beater brush (B), an electrical circuit for powering said motors (M1, M2) from a battery (B) carried by said structure (1), and a three-position control member (31) serving in a first position
20 to stop the motors (M1, M2), in a second position to cause the first motor (M1) to operate, and in a third position to cause both motors (M1, M2) to operate simultaneously, characterized by the fact that the control member comprises a knob (31) mounted to turn on
25 the structure (1), said knob presenting the means (30) for selectively putting the first duct (C) or the coupling (40) for the second duct (41) into communication with the collector (S), and further presenting two cam paths (39a, 39b) each suitable for controlling the
30 opening and the closing of a respective switch, namely a first switch (S1) which, when in the closed position, powers at least the first motor (M1), and a second switch (S2) controlling the operation of the second motor (M2).
- 35 5. A vacuum cleaner according to claim 4, characterized by the fact that the electrical circuit for powering the motors (M1, M2) is made in such a manner that in the

third position of the control member (31), both motors (M1, M2) are powered in parallel, the second switch controlling a microprocessor which manages the power delivered by the two motors (M1, M2).

5

6. A vacuum cleaner according to any one of claims 3 to 5, characterized by the fact that the knob (31) comprises a cylindrical body (33) having a bent channel (36) formed therein opening out firstly in the rear face of said knob
10 (31) and secondly to one side of its periphery, said body (33) being received in a cylindrical cavity (37) formed in the structure (1), the bottom of said cavity including an orifice (21) communicating with the collector (S), and the periphery of said cavity presenting two diametrically
15 opposite orifices into which there open out respectively the first duct (C) and the coupling (40) for the flexible duct (41).

7. A vacuum cleaner according to claim 6, characterized
20 by the fact that the cam paths (39a, 39b) are formed at the periphery of the body (33) and are disposed in parallel planes perpendicular to the axis (32) of the knob (31).

25 8. A vacuum cleaner according to claim 7, characterized by the fact that the first cam path (39a) which controls opening and closing of the first switch (S1) presents two diametrically opposite protuberances (44, 45), and the
30 second cam path (39b) which controls opening and closing of the second switch (S2) presents only one protuberance (46).

9. A vacuum cleaner according to claim 8, characterized
35 by the fact that the protuberance (46) of the second cam path (39b) and the protuberances (44, 45) of the first cam path (39a) are disposed in a plane that contains the axis of rotation (23) of the knob (31).

10. A vacuum cleaner according to claim 9, characterized
by the fact that the two switches (S1, S2) are in
radially opposite regions of the cavity (37) in which the
5 knob (31) is received.

11. A vacuum cleaner according to claim 9 or claim 10,
characterized by the fact that the protuberances (44, 45,
46) are disposed in the plane of symmetry of the bent
10 channel (36).